

INTERNATIONAL STANDARD

**ISO
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Acoustics — Agricultural and forestry wheeled tractors and self-propelled machines — Measurement of noise emitted when in motion

*Acoustique — Tracteurs agricoles et forestiers à roues et machines
automotrices — Mesurage du bruit émis en mouvement*



Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7216 was prepared jointly by Technical Committees ISO/TC 43, *Acoustics*, Sub-Committee SC 1, *Noise* and ISO/TC 23, *Tractors and machinery for agriculture and forestry*.

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International Organization for Standardization
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Acoustics — Agricultural and forestry wheeled tractors and self-propelled machines — Measurement of noise emitted when in motion

1 Scope

This International Standard specifies a method for measuring the A-weighted sound pressure level of the noise emitted by agricultural and forestry wheeled tractors and self-propelled machines, fitted with elastic tyres, the noise being measured while the vehicle is in motion.

It is not applicable to special forestry machinery, for example, forwarders, skidders, etc., as defined in ISO 6814.

NOTE 1 The test method calls for an acoustical environment which can only be obtained in an extensive open space.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6814:1983, *Machinery for forestry — Mobile and self-propelled machinery — Identification vocabulary*.

IEC 651:1979, *Sound level meters*.

IEC 942:1988, *Sound calibrators*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 agricultural tractor: A self-propelled wheeled machine having at least two axles, or a track-laying machine, particularly designed to pull, push, carry and operate implements used for agricultural work (including forestry work). It may be provided with a detachable loading platform.

3.2 agricultural self-propelled machine: A machine, other than a tractor, having its own means of propulsion and normally intended for use in agriculture and forestry.

4 Instrumentation

4.1 A suitable measuring device is a sound level meter meeting or exceeding the requirements of a type 1 instrument in accordance with IEC 651.

4.2 If alternative measuring equipment including, for example, a tape recorder and/or level recorder, is used, the tolerances of the several sections of the measuring chain shall not exceed the tolerances given in relevant clauses of IEC 651. If a tape recorder is used as part of the measuring equipment, it may be necessary to include suitable weighting networks for recording and reproduction to provide an adequate signal-to-noise ratio over the whole frequency range of interest.

4.3 The calibration of the equipment at the time of measurements shall be, in all respects, in accordance with the specifications of IEC 651 for a type 1 instrument. Checking of the calibration shall be carried out at appropriate intervals and at least before and after each measurement session, using an acoustical calibrator in accordance with the specifications of IEC 942 for a class 1 instrument.

The calibrator shall be checked annually to verify its output and its calibration shall be traceable to a national standards laboratory.